

Beecham's



Helpful Hints

and **USEFUL INFORMATION**
for **THE HOUSEHOLD**

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COOKING RECIPES

FISH.

1.—**Baked Cod's-Roe :** *Tomatoes ; cod's roe ; breadcrumbs ; lemon juice ; butter ; pepper and salt.*

Wash the roe and boil in salted-water for about 15 minutes ; drain and if large, cut into slices, lay in a buttered tin, sprinkle over it a little lemon-juice, pepper and salt, sliced tomatoes, breadcrumbs, and some small pieces of butter ; bake for 20 minutes.

2.—**Salmon :** *Fresh salmon ; fish sauce ; sliced cucumber.*

Place in just enough water to cover and boil gently. If the fish is thick, allow 8 minutes for each pound, if thin 6 minutes for each pound. Serve on a folded table-napkin with sliced cucumber, shrimp, anchovy or mayonnaise sauce.

3.—**Fried Soles :** *1 sole ; flour ; frying fat ; breadcrumbs ; 1 egg ; white sauce.*

Wash the fish and dry it ; cover it with flour ; beat up egg, pour on to a plate and dip the fish in it so that both sides are covered ; have ready some dried breadcrumbs spread on a dish, and lay the fish on these, sprinkling some on the top-side also. Heat some fat in a frying-pan and as soon as a blue vapour rises, place the fish in it and fry till brown on both sides, turning it with a fish-slice when the underside is done ; remove from the fat and drain on paper and serve with lemon and white sauce.

4.—**Baked Skate :** *Skate ; $\frac{1}{2}$ -pint milk ; breadcrumbs ; 1 teaspoonful cornflour ; grated cheese ; 1-oz. margarine.*

Boil a thick cut of skate in salted water for half an hour ; skin, bone and flake ; place a layer of fish in a greased pie-dish, and follow by one of breadcrumbs, another of grated cheese and so on till the dish is full. Make a sauce of the milk, cornflour, and margarine, pour over, and bake till a rich brown. Should never be eaten out of season. (August to April in season.)

5.—**Shrimps with Tomato Sauce.**

Cook together 1 tablespoonful each butter and flour until they bubble ; stir into this 1 pint strained tomato liquor, 1 grated onion after being cooked, and 1 pint milk. Boil till thick ; add $\frac{1}{2}$ -pint shrimps, se-



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COOKING RECIPES—continued.

MEAT.

1.—Shepherd's Pie.

Mince $\frac{1}{2}$ lb. cold meat finely, and season with pepper and salt ; put into greased pie-dish, pour over $\frac{1}{4}$ -pint of gravy ; partly boil and chop an onion, add it to the meat ; mash potatoes very well, add a little milk and salt, spread this over the top of the meat like crust, finish it with fork, and put it into a hot oven for 20 minutes till nicely brown.

2.—Stewed Breast of Lamb.

Take the skin off the lamb, and cut it into pieces ; put the meat into a stew-pan and cover with stock, pepper and salt ; stew gently for about 2 hours, until perfectly tender. To serve, thicken the gravy with flour, let it boil one minute, then pour over the lamb and serve with green peas.

3.—Hot-Pot : 2 lbs. potatoes ; 2 onions ; 1 lb. middle neck of mutton ; pepper and salt.

Cut up the potatoes, slice the onion, grease a hot-pot dish, lay some pieces of meat at the bottom, then potatoes, onions, and seasonings ; repeat the layers, leaving plenty of potatoes for the top ; half-fill the dish with cold water, and cover with a greased paper ; when the potatoes are soft, remove the paper and brown the top ; time, about 2 hours in moderate oven.

4.—Boiled Bacon and Haricot Beans.

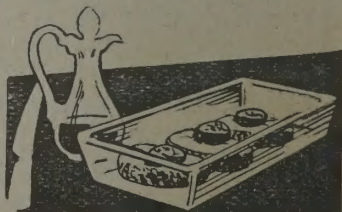
Steep $\frac{1}{2}$ lb. of haricot beans in cold water overnight ; put into cold unsalted water and boil till tender, about $2\frac{1}{2}$ hours ; boil the bacon, remove the skin, put into a baking-tin with the boiled beans and bake about 20 minutes till nicely browned ; serve the beans round the bacon and parsley sauce in a tureen.

5.—Cornish Pasties : Ingredients : $\frac{1}{2}$ -lb. raw beef steak, 1 onion, 6-oz. raw potato, salt and pepper. For the pastry : $\frac{3}{4}$ -lb. flour (or $\frac{3}{4}$ -lb. self-raising flour, when no baking powder will be needed), $1\frac{1}{2}$ level teaspoonsful baking powder, $\frac{1}{2}$ -lb. margarine, water to mix.

Peel and wash the potatoes and cut in small dice. Put the steak and onion through the mincer, then mix all together and season with pepper and salt. Moisten with a spoonful of water. To make the pastry.

Sift the flour and baking powder into a basin. Rub the fat into them and then mix them to a stiff paste with cold water.

Roll out the pastry on a lightly floured board and stamp it into rounds six inches in diameter. The lid of a sauce-pan can be used for this pur-





COOKING RECIPES—continued.

pose. Turn the rounds on to the other side and place a good spoonful of the meat and potato mixture in the centre of each. Damp round the edges of the rounds and draw the sides to the centre so that the pastry stands up and forms a half circle. Pinch the edges of the pasties together securely, and flute them with your thumb and first two fingers. Place them on a baking sheet. Glaze the pastry by brushing it with beaten egg yolk mixed with a

spoonful of milk. Pierce a small hole in each pasty so that the steam may escape. Put them into a hot oven to bake, lessening the heat as required. Serve them hot. They will take from forty to forty-five minutes. This quantity makes eight pasties.

SWEETS.

1.—Fig Pudding : $\frac{1}{4}$ -lb. nicely chopped suet ; $\frac{1}{2}$ -lb. breadcrumbs ; $\frac{1}{4}$ -lb. flour ; 3 tablespoonfuls castor sugar ; $\frac{1}{2}$ -lb. figs well-chopped ; 2 eggs ; milk ; a pinch of salt.

Chop figs and put on to stew with one cupful of milk. Put all other ingredients in basin. Put in figs and whisk with a fork. Boil in the buttered basin for three hours. Serve with lemon or white sauce.

2.—Marmalade Pudding (extra Light) : $\frac{1}{4}$ -lb. suet ; $\frac{1}{4}$ -lb. breadcrumbs ; $\frac{1}{4}$ -lb. fine sugar ; $\frac{1}{2}$ -lb. marmalade ; $\frac{1}{2}$ -gill milk ; 1 egg.

Mix the dry ingredients together ; beat egg, add milk and marmalade ; add these to the dry ingredients, mixing all well together ; put into a well-buttered basin, with a buttered paper on top ; tie up with a cloth, and steam two to three hours.

3.—Rice Pudding (Baked) : 3 dessertspoonsful rice ; 1 pint milk ; pinch of salt ; 2 dessertspoonsful sugar ; nutmsg ; 1 egg.

Put the rice in a pie-dish with enough water to cover ; bake about 10 minutes, slowly, till the rice begins to swell and absorbs the water ; remove from the oven, stir in the milk, egg, salt, sugar, and nutmeg ; bake slowly for $1\frac{1}{2}$ hours.

4.—Apple Dumplings.

Peel 6 medium-sized apples very thinly, core them, but do not cut up ; cut $\frac{1}{2}$ -lb. short pastry into 6 pieces and roll each piece into a ball ; take 1 apple, work it into the centre of each paste-ball, put a clove and some sugar into the centre of each apple before closing the pastry ; place on a greased tin ; bake slowly for half an hour.

COOKING RECIPES—continued.

5.—Roly-Poly Pudding.

Put $\frac{1}{2}$ -lb. flour in a basin ; add 4 ozs. suet chopped finely, pinch of salt, 1 teaspoonful baking powder, sufficient cold water to make into a nice paste ; knead until smooth ; roll into long thin piece, spread jam over, keeping it away from the edge. Roll up pastry, press ends together, and put into well-floured pudding-cloth ; tie tightly up, place in pan of boiling water and boil $1\frac{1}{2}$ hours.

6.—Yorkshire Pudding.

Mix 3 tablespoonsful flour and half-teaspoonful salt together ; beat 1 egg, and add half-pint of milk to it ; pour gradually upon flour ; mix thoroughly, and beat mixture until quite smooth and light ; melt some dripping in pudding-tin, and when quite hot pour in the mixture ; bake about half-hour and serve hot.

7.—Ginger Pudding : 1 cupful breadcrumbs ; 1 cupful flour ; 1 cupful suet ; 1 teaspoonful ground ginger ; half-teaspoonful carbonate soda ; 2 tablespoonsful sugar ; half-cup warm treacle, and little milk.

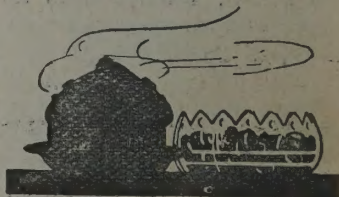
Dissolve the carbonate of soda in a little warm milk ; mix all together ; put in greased basin, and steam for three hours.

8.—Bakewell Pudding : $\frac{1}{4}$ -lb. castor sugar ; $\frac{1}{4}$ -lb. butter ; 2 ozs. ground almonds ; 1d. sponge-cake (crumbled) ; 2 eggs ; little essence of almonds ; jam ; candied lemon-peel.

Line a shallow pie-dish with short pastry ; spread on a layer of raspberry jam, and a little cut candied lemon-peel ; warm the butter well, then beat it into a cream, with the sugar, then add the eggs (well-beaten), next the ground almonds and the essence, and lastly the sponge-cake crumbs ; bake in a moderate oven until set ; decorate with blanched almonds.

9.—Ground Rice Pudding : For this simple pudding you will require $1\frac{1}{2}$ pints of milk ; 2 tablespoonsful ground rice ; 2 desert-spoonsful sugar ; 1 beaten egg ; 3 tablespoonsful jam ; 3 table-spoonsful desiccated cocoanut ; a few drops of vanilla essence.

Mix the ground rice and sugar to a paste with a little milk, heat the rest of the milk, and add to the rice paste. Return the mixture to the saucepan and bring to the boil, then cook slowly for 5 minutes. Allow to cool, then add the eggs (well beaten) and vanilla essence. Mix together the jam and cocoanut, divide in two, and line the bottom of a pie-dish with one portion ; pour over half of the rice mixture, cover with the remainder of the cocoanut and jam, then add the rest of the rice. Bake in a moderate oven for 30 minutes, taking care not to allow the mixture to boil.





HOUSEHOLD ♦ HINTS

Removing Grease from Floors.

If hot grease is spilled on a boarded floor cold water should be poured on to it immediately. This will harden it and prevent it from sinking into the wood, enabling it to be scraped off with a knife.

A Varnish Brightener.

Varnish can be brightened by rubbing with a cloth moistened with linseed oil.

Removing Stains from Hands.

Lemon juice will remove any vegetable stains from the hands.

Removing Iron Rust from Fabrics.

Sour milk will often remove iron rust from white fabrics.

A Coal Saver.

If a strong solution of soda is thrown over coal just before it is placed on the fire a considerable saving in coal will result.

Polishing Brown Footwear.

Brown boots or shoes should be rubbed over with a slice of raw potato before the polish is applied, and it will be found that they are easy to clean and they take a very good polish.

A Time Saver.

Potatoes will boil much more quickly if cut the long way instead of across.

To Obtain More Juice from Lemons.

If lemons are heated just before squeezing much more juice will be obtained.

Another Use for Salt.

If a pinch of salt is added to the white of an egg it will whip more quickly.

Hint for Bacon Frying.

Bacon will not shrink if dipped in flour before frying.

To Make a Jelly Set Quickly.

A jelly will set much more quickly if only a small quantity of nearly-boiling water is used to dissolve the jelly and cold water added to make up the quantity.

HOUSEHOLD HINTS—*continued.*

Grease Stains on Fabrics.

Grease spots can be removed from silks and fine fabrics by placing blotting paper over the spot and ironing with a hot iron.

Hint on Boiling Fish.

When boiling fish add the juice of half a lemon to the water, and the fish will be kept white.

To Avoid Bruises.

To prevent the skin from bruising after a knock or fall take a little dry starch or arrowroot, moisten it with cold water and lay it on the affected part.

Cleaning Burnt Saucepans.

Burnt saucepans can be cleaned by filling them up with water to which has been added some soda and bringing them to the boil.

Removing Ink Stains from Carpets.

Black ink stains on carpets can usually be removed by pouring milk over the spot immediately it has been done, rubbing dry, then rubbing with a paste of salt and milk, cleaning off with a rag moistened with milk.

Cleaning Cane Chairs.

Cane chairs can be cleaned by rubbing with half a lemon dipped in salt, and then sponging with water.

Keeping Knives Clean.

Ordinary knife blades can be cleaned by rubbing with a raw potato after washing. Ivory handles can be cleaned with half a lemon dipped in salt.

Removing Fruit Stains.

Fruit stains should always be treated as soon as possible after they have been made. Take the article out in the open air and pour petrol over the spot after stretching the material. The juice will curdle on the surface and can be washed off.

To Prevent Milk Boiling Over.

Milk will not boil over if you use an outer pan containing water, the receptacle for the milk being placed inside.

Removing Glass Bottle Stopper.

If the stopper of a glass bottle has become fast, rub a drop or two of salad oil round the stopper close to the mouth, and then hold at a distance of about eighteen inches from the fire. When the stopper has become warm it can be gently tapped till loose.



WIRELESS WISDOM



Reception of broadcast programmes can be truly said to be within the reach of everybody. Receiving sets have been designed to meet practically every conceivable requirement, from the simple crystal detector to the super-heterodyne mains set. The man who cannot find a receiver to meet his own particular requirement is, indeed, hard to please.

Care of Set. Successful reception depends on many little points which should receive attention from time to time. Firstly, there is the aerial, which, if it is of the outdoor type should be taken down every three months or so and the insulators cleansed of all deposit. If the aerial wire is not enamelled, it will probably be found that surface corrosion has set in. If this is so, it should be replaced with enamelled wire. Examine the halyards and pulleys.

The earthing switch should also be cleaned and the moving parts treated with vaseline. The earth lead from the set should be well-insulated and the connection points should make excellent contact. If the earth is of the buried plate type, the use of the watering-can during dry weather will often secure improved reception.

Valve holder sockets, switch contacts, coil plugs, etc., all require an occasional rub with very fine emery-paper, and cleanliness throughout the set is essential.

Terminal nuts have a habit of becoming slack in some mysterious manner, and should be periodically examined and tightened up.

The terminals of the L.T. accumulator should always be kept clean, and once more a smear of vaseline will work wonders in keeping the corrosion away. Give the wander plugs of the H.T. battery an occasional rub with fine emery-paper and you will be surprised at the extra pep the battery seems to possess.

Possibly the most popular receivers of to-day employ one or two stages of screened grid amplification, thus providing a powerful magnification of the feeble currents picked up by the aerial, before passing them on to the detector valve. The detector stage is usually followed by one stage of low frequency amplification, whereas the sets of yesteryear nearly always

WIRELESS WISDOM—*continued.*

employed two stages of L.F. amplification. Nowadays we have discovered that it is very important to arrange metal screens around the various tuning components thus preventing interaction and increasing the selectivity of the set.

Types of Sets.

The portable set has a certain amount of "appeal" to a considerable portion of the public. This type of set can be placed into two categories:

- (i) the suitcase type which is carried vertically and operated horizontally with the lid open, and
- (ii) the cabinet model, which is carried and played in a vertical position.

The regional scheme of distribution of several power stations in this country will make it imperative to have a high degree of selectivity in one's receiver, and here the portable set has a great advantage, employing as it does, a frame aerial with marked directional properties. Most of these sets are fitted with a turntable, enabling the set to be easily rotated for maximum sensitiveness, or for the exclusion of an unwanted transmission.

Mains sets, as they are called, are receivers that are constructed so that they can be operated by using the electric lighting mains as the source of power, thus eliminating the H.T. and L.T. batteries. Valve manufacturers have evolved a range of special valves for use in mains sets which have wonderful characteristics, and the use of these valves coupled with the absence of battery bother, has undoubtedly brought radio reception almost to perfection. There are two types of mains supply, *i.e.*, D.C. (direct current) and A.C. (alternating current). The construction of the receiver for use on D.C. is much simpler than that which employs A.C.

D.C. mains have definite and unchanging positive and negative poles at a practically constant pressure, and to enable us to make use of them for high tension supply it is only necessary to smooth out any roughness or commutator ripple by means of chokes and condensers.

If you are at present on D.C., before buying an eliminator or a mains set, you will be well-advised to ascertain whether there is any possibility of an early change over to A.C.

In the case of A.C., we have rapidly pulsating and reversing current rising from zero to maximum voltage in one direction, falling to zero again, and rising to maximum voltage in the opposite direction some 40 or 50 times per second. To apply this type of current directly to a wireless receiver would merely result in a distressing hum, and it is, therefore, necessary to

WIRELESS WISDOM—*continued.*

first rectify it or make it unidirectional. This can be done quite easily by means of a rectifying valve or by a metal rectifier. The main components of a rectifying valve unit for A.C. are :

- (i) a mains transformer to step the voltage either up or down to meet the requirements of the rectifying medium ;
- (ii) a rectifying valve or a metal rectifier to make the current unidirectional ;
- (iii) smoothing condensers to wipe out any ripple or hum ;
- (iv) resistances to split up voltage to required values.

If A.C. valves are to be used the mains transformer should have a separate secondary winding to provide the 4-volt heater supply. **Radiogram.**

The combined wireless receiver and gramophone, universally known as the radio-gram, is becoming increasingly popular, especially the all-electric models.

The pick-up is quite a simple piece of apparatus, and consists in nearly all cases of some form of a reed which is free to move between the pole pieces of a small electro-magnet. The end of the reed carries the needle holder into which an ordinary gramophone needle is clamped. The needle in traversing the grooves in the record causes a vibration in this reed or armature which induces a small electrical current of varying intensity to flow in the windings of the electro-magnet surrounding it, in exactly the same way as the revolving armature in a dynamo generates electricity.

Naturally, these impulses are very minute, a mere fraction of a watt, but they can be conveniently amplified by a radio set and faithfully delivered as sound-waves by the loud speaker.

Loud Speakers.

Loud speakers can be grouped into three classes, viz : horn, cone, and moving coil. The horn type of speaker is now practically obsolete, and although quite a number still remain in use, they are gradually being replaced by the more modern cone or moving coil instrument. The latest 8-pole super-dynamic units which are comparatively inexpensive, give excellent results ; but for the man with the musical ear the moving coil speaker is the most satisfactory instrument.

Loud speakers may thus be summed up as : (1) Horn type—suitable for reproduction of speech ; (2) Cone—suitable for reproducing music with a reasonable degree of purity, but apt to be a bit muffled on speech ; (3) Moving Coil—the best known method of reproducing sound.





NUMEROLOGY

The science of numerology is recognised as being of great antiquity, having been practised for thousands of years, for it was an old science 2,000 years ago.

That it is a deep and reliable science there can be no doubt, and many people are turning to this age-old science in these days of trials and tribulations. Even for those who do not believe in it, numerology presents a fascinating study, and provides a first-class pastime for an odd half-hour or so.

The staple theory behind this wonderful science is that all life is governed by the law of mathematics, and that nothing happens accidentally. It is thus contended that each individual is named by a name which contains the key to his or her personality, and numerology enables that key to be used.

But perhaps your name as it now stands is as lucky as it is possible for it to be. Numerology will tell you this. Every letter of the alphabet has its special number, and each number has its particular meaning. By reducing the letters of your name to numbers and totalling the numbers, your fate will be made clear.

The numbers 1 to 9 go to make what the numerologists call a complete cycle of vibration.

For the purpose of analysis of names the letters of the alphabet are translated into terms of numbers, as follows:—

1	2	3	4	5	6	7	8	9
A	B	C	D	E	F	G	H	I
J	K	L	M	N	O	P	Q	R
S	T	U	V	W	X	Y	Z	

To find the single unit of a name, place under each letter its number value, thus:—

W	I	N	S	T	O	N	C	H	U	R	C	H	I	L	L
5	9	5	1	2	6	5	3	8	3	9	3	8	9	3	3

Next find the total of all the numbers. In this case it is 82. Eighty-two reduced again, by adding the two figures together, is 10, which reduced still further is 1. The point is that the total must be reduced until it is 9 or under.

Having analysed your name in this manner, you will have discovered your numerological number, whether it be 1, 2, 3, 4, 5, 6, 7, 8, or 9. What each number stands for is explained below:—

One.—A strong number, representing force, creative ability, individualism, and self-assertiveness. The bearer of this number

NUMEROLOGY—continued.

must be careful not to become too officious and dominating.

Two.—A social number. Tact, diplomacy, and the ability to make friends will ensure its owner happiness. It is a number of the heart rather than the mind.

Three.—Mirth, good cheer, pleasure, and inspiration are the principal characteristics of this number. It is the number of orators, actors, singers, dancers and painters.

Four.—The number of the hard worker, the plodder, bringing poverty, drudgery, and lack of initiative and understanding.

Five.—People ruled by 5 accomplish little, but lead a confused, unstable existence. Five is the symbol of the rolling stone.

Six.—Those owning this number are the backbone of the nation. They are staunch friends, good citizens, honest, reliable people, and home-makers. It is the marriage number.

Seven.—Those ruled by this number have a hard time in the world, and are not destined for renown and glory. Their natures are full of beauty and poetry, and tend towards the occult.

Eight.—The number of business success, achievement, attainment, and acquirement. Money and success are the qualities this lucky number attracts.

Nine.—Has the success of No. 8 with the difference that Eight is a practical number. Genius and great talent are the qualities of this number. Its influence is universal.

If the numbers in your name when reduced make either 11 or 22, do not reduce them further to 2 and 4, respectively, but let them stand, as these two numbers have a special significance.

Eleven.—This is the number of genius. These people seem to be lighted by an inner fire. They are marked by serenity under all circumstances, no matter how adverse.

Twenty-two.—This number has brought to mankind great reformers, great leaders for good. If this number is given its destructive expression, however, it runs into bigotry, religious mania, and even into miserliness.

Another Method.

We give another method of enabling a person to overcome many of life's little hardships, for forewarned is forearmed, and if we have an idea of likely pitfalls we can surely avoid them, thus making our lives happier.

The groups of questions following are read through and answered by "yes" or "no," as befits the case. If three or more can be answered "yes," the number of the group is put down as the first key number. If "no" is the predominating answer, the number is ignored. The key number "0" is used when the majority of the answers in every group is negative.

On completing seek the analysis under the key number.

NUMEROLOGY—continued.

- Group 1:* Have you an even temper ?
Are you contented with your lot ?
Does solitude make you unhappy ?
Do you give way to stronger wills ?
Do snubs hurt you ?
- Group 2:* Do you alter your views to suit other people's ?
Are you changeable ?
Do you encourage the advice of friends ?
Do you wish for a sound position ?
Can you manage your business without outside help ?
- Group 3:* Do slight indispositions of health affect you ?
Are your friends of a mixed kind ?
Are you easy in company ?
Do you like social gatherings ?
Are your ideas on politics or religion definite ?
- Group 4:* Does your present station in life suit you ?
Are you particular about your appearance ?
Do frustrated wishes distress you ?
Do introductions to strangers make you feel awkward ?
Are you annoyed by people with bad taste ?
- Group 5:* Does your health worry you ?
Are you saving ?
Do you prefer light to serious friends ?
Are you economical over little things ?
Are you able to give up small joys in the hope of greater ones in the future ?

Key Nos.

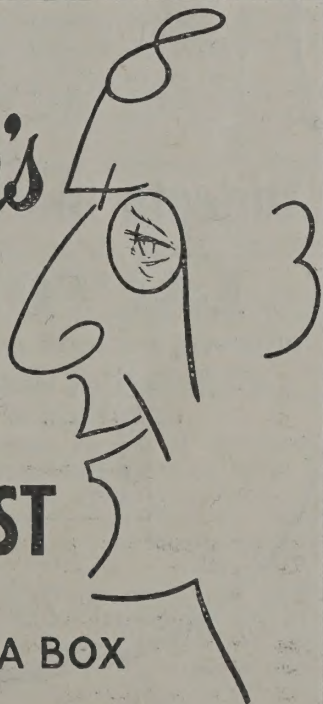
- 0 You have a strong will, but should defeat stubbornness.
- 1 Take advice from older people and care in making friends.
- 2 You are a sound friend, but guard against indecision.
- 3 You are an idealist, but cultivate a sterner outlook.
- 4 Choose the things you want most with care.
- 5 You have an alert brain, and should make no mistakes.
- 12 You appreciate true happiness.
- 13 Do not make hasty decisions, but seek advice.
- 14 You expect much, but sense of humour kills dissatisfaction.
- 15 Your generosity may harm you, so choose friends carefully.
- 23 Needing sympathy, you will be caused pain by others.
- 24 You have an executive ability, but use it with care.
- 25 Make your own decisions with regard to personal matters,
but be guided by others in politics or religion.
- 34 You lack sympathy, but you have an adaptable mind.
- 35 Possession of common-sense will overcome difficulties.
- 45 You will achieve much if you are tactful.
- 123 You have a gift of contentment, but do not be ruled by it.
- 124 Beware of hasty judgments and sociable ambitions.

NUMEROLOGY—*continued.*

- 125 You will be admired for your gift of diplomacy.
134 If you are careful you will achieve those things you desire.
135 Although underrated, you will achieve your object.
145 Being practical you will make a success of your life.
234 You value many small things instead of one big thing.
235 You are rather fond of being much in evidence.
245 Your high ideals may lead you to despair of success.
345 Too well-treated ; this may lead to dissatisfaction.
1234 Your unassuming personality will bring you happiness.
1235 Although assured of an uneven life, you possess a quality which will bring you out on top.
1245 Inconsiderate although jealous of your own privileges.
1345 You are inclined to be intolerant.
2345 Your great patience will bring you success.
12345 One of your strongest features is caution.

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IN YOUR
SHOPPING LIST

—
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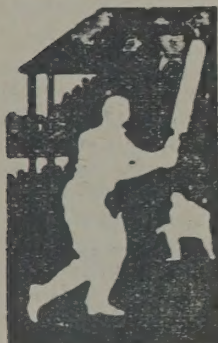
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SOME SPORTS OF THE DAY

CRICKET.

Cricket is essentially a fine-weather sport and for this reason is played during the summer in this country.

The sight of a number of dazzling white forms against a background of brilliant green is one never to be forgotten.

This game is also of International interest, as is shown by the Test Matches played with other countries, and the keen

rivalry between our own country and Australia in the contests for the Ashes is known the world over.

Besides our county teams, we have a great number of local clubs, where really good cricket is played, a sure indication of the keen interest taken in this sport.

The number of players in the game is eleven on each side, and the score is reckoned by runs, these being made by the two players crossing, making good their ground from end to end.

The wickets are pitched opposite to each other, at a distance of 22 yards. Each wicket comprises three stumps, making a width of 8 inches, 27 inches out of the ground, and with two bails on top. The stumps must be of sufficient thickness that when in the above position the ball cannot pass between them.

The ground must not be rolled, watered, covered, mown or beaten during a match, except before the commencement of each innings and of each day's play, when, unless the in-side object, the ground may be swept and rolled for not more than ten minutes. The batting side can have the wicket rolled and swept before the commencement of each innings.

The ball, which must weigh between $5\frac{1}{2}$ and $5\frac{3}{4}$ ounces and measure between 9 and $9\frac{1}{4}$ inches in circumference, must be bowled, not thrown or jerked.

The ball is bowled in overs of six balls from each wicket alternately. The bowler cannot bowl two overs consecutively in one innings.

The l.b.w. law is very difficult to enforce, as can be readily seen:—If with any part of his person, the player stops the ball, which, in the opinion of the umpire at the bowler's wicket, shall have been pitched in a straight line from it to the striker's wicket and would have hit it, the verdict is leg-before-wicket. A batsman can be out whether a ball breaks or not.

SOME SPORTS OF THE DAY—*continued.*

CRICKET—*continued.*

The striker may hit a no-ball, this being a ball thrown or jerked by the bowler, or a ball bowled with both feet in front of the bowling crease, and any runs resulting are added to the score. If no score is made, one run is added for a no-ball. A ball which, in the umpire's opinion, is bowled too high or too wide for the striker to reach is called a wide ball. As many runs as are made from a wide ball are added to the score, and if no runs are made, one run is added as with a no-ball. If the striker should hit a wide ball it cannot be termed as such, even though the umpire should call it. Neither a no ball nor a wide ball shall reckon as one of the over.

The following are new regulations which have been adopted in County Cricket :—

- 1.—*Wickets* shall be one inch higher, and one inch wider than previously. The new height out of the ground being 28 inches, and the new width 9 inches.
2. *Rolling of Wicket.* The time allowed for rolling the wicket is now seven minutes and not ten as hitherto.
3. *L.B.W. Rule.* The striker shall be out even if the ball hits the bat before hitting any part of his person, provided in the opinion of the umpire it would have hit the wickets and was pitched in a line between the wickets.



SWIMMING.

The pleasure of swimming, both as a recreation and a sport, cannot be overrated, and with the increased facilities of both indoor and open-air swimming-baths now being built in increasing numbers, it is natural that it should now be enjoyed more and more by both sexes.

The best advice to all would-be swimmers is to first learn confidence in the water. To gain this confidence, the best procedure is to grasp the bar at the side of the swimming-bath and slowly raise the legs until they are at the top of the water, at the same time dropping the head backwards until only the face is out of the water. If the grasp on the rail is slightly slackened, it will be found that the water keeps the body afloat, and by gradually dispensing with this support the necessary confidence in the water can be acquired.

SOME SPORTS OF THE DAY—*continued.*

SWIMMING—*continued.*

The Breast Stroke.—When starting for the first stroke, draw the elbows nearly to the sides at the same time bringing the forearm and hands to the front of the chest with the palms of the hands downwards near to the surface of the water, the fingers being extended and closed and the forefingers and thumbs touching. The hands are then pushed forward in front of the body to the full extent of the arms, the palms of the hands are turned slightly outwards, and the arms swept round until in a right angle with the shoulders, when the elbows are dropped and the hands come up in front of the chest for the next stroke. As the arms are swept backwards the legs are drawn up, the knees being turned outward to the right and the left and the heels nearly touching. The legs are then kicked outward and swept round as the arms are being pushed forward to their fullest extent.

The Crawl Stroke.—This stroke is much faster than the breast stroke, but is rather more difficult to learn.

It can be realised that water will support a body whether floating on the back or the face. Hold on to the rail with one hand, face the water and place the feet against the side of the bath, then lower the face into the water and push off from the side bringing the arms together in front of the head. Now try this, at the same time threshing the legs up and down in turn, the toes pointing slightly inwards and the heels just breaking the surface of the water.

In the crawl stroke, the arms are the main propellers, and, therefore the arm movements require the most attention.

Each arm is brought out of the water at the side of the head with the forearm pointing in front, and the arm slid into the water and swept down to the side as strongly as possible. The arms, of course, follow each other, and do not move in unison.

The breathing is rather difficult in this stroke, as the face is mostly submerged. As one of the arms is brought out of the water the face is turned sideways and a deep breath taken. The side the breath is taken on depends on the swimmer, as some will find it easier to breathe on one side and some on the other.



HIKING.

Who can deny that one of the greatest pleasures we can experience is to wander along the leafy lanes of the countryside or traverse the wide expanses of moorland and see Nature at its best and happiest?

In the last year or so hiking has become one of the foremost

SOME SPORTS OF THE DAY—*continued.*

HIKING—*continued.*

sports indulged in by all classes, and it is well-nigh impossible to pass through the country without meeting either one or more hikers.

By far the best procedure is to take train to a pre-arranged spot and hike from there either in a homeward direction or farther afield. Make all necessary arrangements beforehand and see that sufficient supplies of necessities are included in the knapsack, which should not be too large or too heavy. Boots, one of the main items for consideration, should be a good fit, neither too small nor too large and the feet should be looked after above all things. It is a good plan to sprinkle the inside of the socks or stockings with boracic powder, as this prevents chafing and soreness. Be careful that the pack does not rub the shoulders or the back, and wear light but warm clothing.

The novice is advised to join a rambling club and to take it rather easily in the first stages, as unless he or she is used to walking, the extra strain on the muscles will certainly affect him.

ICE RINKS.

The sport of skating is having, to-day, a tremendous vogue, and with the advent of the indoor ice rink, has become almost fashionable. The vagaries of our climate are such that we cannot expect any degree of frost to give us a sufficiently long spell of skating weather; indeed, for the last few years the opportunities have been practically non-existent.

To the older people the thrill of ice-skating is no new thing, but there are countless younger ones who have never experienced the pleasure of the effortless glide over the cold, glassy surface.

A good pair of skates are essential, and boots should be worn with them as they provide support for the ankles, which is not given by shoes. The mere male can wear any warm clothes, as, naturally, the atmosphere is chilly, but for lady skaters a rather wide pleated skirt is recommended as giving freedom to the limbs, together with a warm jumper.

If possible, a few lessons should be taken, as the cost, which is inconsiderable, is well worth the confidence gained when venturing alone on to the ice. Be prepared for a few falls, as these are the lot of all beginners, and should on no account be allowed to discourage the novice.

Apart from the pleasure, one must not forget the benefits derived from this sport. Practically all the muscles are brought into play, and the brain has to function with celerity at the same time.



TOILET and BEAUTY HINTS



The golden rule to health is cleanliness. The same can also be said about beauty, and particularly internal cleanliness.

All women aspire to beauty, but even if not so well-favoured as she might desire, she can still possess that charm which is the key to the admiration of others. A clear, beautiful skin can be as attractive as perfect features, and every woman can possess this attractive asset by following

the simplest of rules—Cleanliness.

Thus the first aid to beauty is a clean, healthy body, and nothing can ensure this better than an occasional dose of Beecham's Pills, Nature's own remedy. * Provided the system is in perfect condition, it follows naturally that the skin will retain that youthful bloom which is the envy of all.

The hot bath is the finest cleanser for the skin, and is most efficacious taken just before retiring for the night.

As a tonic, there is nothing finer or more enervating than a cold bath, at a temperature of between 60 and 70 degrees Fahrenheit; the immersion lasting not longer than three minutes. A thorough massage with a rough towel after the cold dip completes the revivifying effects, and brings that tingling glow to the body which is so stimulating.

Refreshing sleep is a great aid to beauty, and care should be taken that the bed is conducive to this. The most suitable type is one which is not hard, yet does not sag and allow the body to become bent in an unnatural pose. A spiral spring mattress is undoubtedly the best and gives just sufficiently to the curves of the body, yet affords correct support.

Take plenty of exercise regularly, as this keeps the blood-stream flowing, thus feeding all the tissues of the skin.

The complexion may be improved by the regular use of an oatmeal bath, made by placing two tablespoonsful of oatmeal in a small bag and pouring boiling water over it. As the water cools it is used to bathe the face and neck, afterwards thoroughly drying the skin with a soft towel. A good vanishing cream should then be applied, and a light dusting of face-powder.

The teeth demand as much attention as any part of the body, for they lie in the pathway of everything entering the system

TOILET AND BEAUTY HINTS—*continued.*

through the mouth. They should, without fail, be cleaned after every meal, using a good dentifrice and a moderately stiff tooth-brush, making sure that every particle of food which might have become lodged in a crevice has been removed. Many a woman who might have been classed as plain, has blessed the care expended on her teeth, for, on smiling, the pretty gleam of perfect teeth transforms the ordinary face into a thing of beauty. A periodical visit to the dentist is advised, in order that the teeth may be overhauled, and any repairs effected.

Do not wear too many clothes ; but, on the other hand, do not wear too few ; and choose the clothes sensibly. A foundation of fine wool is safest, with sufficient outer clothes to keep the body warm. Dress neatly and quietly, choosing an ensemble which enhances the beauty, and always avoid clashes of colour, or a too vivid colour.

The hair should be given every attention, and should be kept clean and bright. Good shampoos are obtainable in varieties to suit different kinds of hair. Brush the hair well night and morning, and dress it in a becoming fashion, as the hair forms a frame for the face and can make or mar a beautiful picture.

Regarding diet, it is safe to say that one may eat what agrees with one, and in moderation, but eating between meals is not advisable. Drink plenty of water, and with the exercise advised, the body should be in a perpetually healthy condition.

Most women nowadays make use of cosmetics to aid them in looking their best, and a few remarks are wanted on this subject.

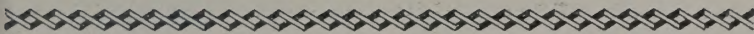
Always use the best quality, and on discovering a particular variety which suits the individual, adhere to it.

Powder has already been mentioned, and can be dismissed quickly. Having cleansed the face, apply a good vanishing cream, then a little rouge to the cheeks. This needs careful application, as nothing can look so hideous as a bright red on the cheeks, particularly if it is not in exactly the right spot.

The question of perfume is rather particular. If possible, the user should choose one which expresses her personality, and cling to the same perfume always. A light spraying on the person and a dab behind the ears completes the toilet.

If these few rules are followed there is no reason why any woman should not look her best at all times.





BOY SCOUTS & GIRL GUIDES

It is usually conceded that the Boy Scout movement had its origin during the siege of Mafeking, in the South African War. Lord Baden-Powell had for some years previous to the outbreak of war, been conducting classes for training the soldiers under his command in scouting and campaigning, having as his object the training of character as well as efficiency.

When his troops were beleaguered in Mafeking, his chief staff officer, Major Lord Edward Cecil, organised the boys of the town as a general utility corps on the same lines as the army scouts.

This scheme was successful to such an extent that when Lord Baden-Powell went to organise the South African Constabulary, he adopted the patrol system in training them for field work. The uniform chosen for them was the now very familiar cowboy hat, shirt, green tie and shorts, and badges were awarded for efficiency in different branches of work.

The first trial camp for scout training for boys was held in 1907, and its success was so pronounced that Lord Baden-Powell decided to continue. He published, in 1908, "Scouting for Boys," and this led to the formation of troops of scouts in various places throughout the United Kingdom. The movement caught on and spread so rapidly that in 1910, Lord Baden-Powell left the army and devoted himself entirely to the movement.

The movement started by Lord Baden-Powell has become of world-wide importance, for at the great Scout Rally, held at Olympia, in 1920, at Paris in 1922, and at the Jamboree held at Arrowe Park, near Birkenhead, two years ago, delegates from practically every country in the world were present.

Every city and town has its troop or troops, and the work of the scout-masters in training the adolescent members to become upright citizens is invaluable.

The Girl Guide movement was also originated by Lord Baden-Powell, and provides that girls are given a training similar in principle to that of the Boy Scouts. Their training is naturally not quite so masculine as the boys', but the main object of moulding the character into the best form is adhered to.



DOMESTIC PETS

There are qualities possessed by the more popular household pets which endear them to the hearts of their owners, and on this account alone they should be treated with all the care and love it is possible to bestow upon them.

It is safe to say that the dog is the most popular pet for the home. The almost human intelligence possessed by this animal makes it a wonderful pal for both grown-ups and children ; a friendship

which is usually only severed by the death of the animal.

The main points to remember in the care of the dog are correct feeding, cleanliness, and adequate exercise.

The household dog should, in the case of smaller animals, be given a bed indoors, a basket or box large enough for the animal to move about in, and lined with clean straw or clean rags. The bed should be changed frequently in the case of straw, or, if rags are used, washed and disinfected. It is policy to disinfect the bed now and again with Sherley's Insect Powder, thus ensuring freedom from vermin.

Regarding ailments, the best plan is to keep a copy of Sherley's Dog Book in the home, and at the first sign of the dog being out of condition, treat it according to the symptoms, with the particular medicine expressly made for the purpose. Even if well, it is advisable to give a course of Tonic and Condition Powders occasionally to keep the system in perfect order.

Distemper usually attacks dogs and cats while in the puppy or kitten stage, and at the first sign of running nose and eyes and a high temperature, place the animal in a warm place and give a course of Lintox, the wonderful Distemper Preventive and Tonic.

The cat does not seem to be so domesticated as the dog, but makes a great pet. Many people prefer the cat to the dog, so it seems to be merely a matter of choice.

A cat will keep itself clean by licking its paws and washing itself, but it can be assisted in the process by smearing the paws with a little butter. Long-haired cats need frequent brushing and combing, and care should be taken to remove all loose fur regularly, as grave results may be expected if the loose fur is taken into the stomach.

A fund of information is contained in Sherley's Cat Book, and no person owning a feline friend can afford to be without a copy.

Don't let your Dog Suffer unnecessarily

An "out of Condition" Dog is suffering unnecessarily. Listlessness, Loose Coat, Irritating Skin Trouble. Poor Appetite can easily be remedied and prevented.

KEEP HIM FIT!

and Vigorous, Happy and Healthy—free from Doggy Ailments and always ready to please you. Give him Sherley's Tested Dog Medicines.

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LACTOL BISCUITS

carry on the good work of Lactol, continuing the growth of sound bone and perfect development. They contain Vitamin D.



CHILDREN'S PAGES

How would you like to make a little boat which will sail about by itself ? You can play with it in the bath or in a bowl of water, but you must be careful not to make a mess by splashing the water on the floor.

First, you must make a little boat. If you are a boy you may be able to make one out of a small piece of wood, and cut to a point at the front so that it will cut through the water like a real ship. You can also make one out of cardboard, and

an excellent little vessel can be made out of a half-walnut shell, if you can find one. If a mast and a sail are fixed into your little ship it will make it look ever so much more real. A matchstick with a paper sail looks quite realistic.

Now, you want the engine to make it sail along, and for this ask mother for a small piece of camphor ; she will probably have some for keeping away moths. If not, a penny will buy quite a big piece from the chemist. Break off a piece of this and fix it to the back of the little boat by tying it on. Place the boat in the water and away she will go, sailing round and twisting and turning just as though there were a tiny man steering it in reality.

RIDDLES.

When is a piece of wood like a king ?

When it is a ruler.

Why is a fish like a shopkeeper ?

Because it has scales.

Why is the letter " T " like an island ?

Because it is in the middle of water.

What does a football do when it stops rolling ?

Looks round.

Why does a wig resemble an untruth ?

Because both are falsehoods.

What kind of insect is made by a blacksmith ?

The firefly.

What burns to keep a secret ?

Sealing-wax.

What is that which you often return but never borrow ?

Thanks.

What breaks as soon as it appears ?

The dawn.

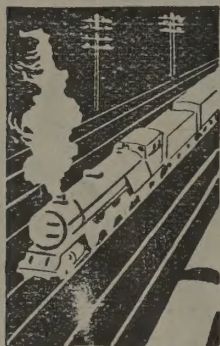
What pets should often be beaten ?

Carpets.

“ PUZZLE PICTURE ”



Little Bo-Peep has lost her Sheep and
doesn't know where to find them.
Can You find them for her ?



HOW IT WORKS

THE STEAM ENGINE.

It was through the attention of a small boy to the force exerted by the steam issuing from the spout of a kettle that the power of steam was first discovered. James Watt, this small boy, playing with a spoon held over the spout of the kettle, noticed how the steam lifted up the spoon. Later he put this discovery into practice; but naturally the first steam engines were very crude and unreliable. Although the difference between

Stephenson's "Rocket" and a modern locomotive is so great as to make comparison odious, the principle remains the same.

In the locomotive, the driving force acts directly on the axle, causing the wheels to revolve. To increase the power of the steam, engines are fitted with what are called "super heaters." This is usually a series of tubes, the surfaces of which are exposed to the hot gases of the boiler furnace; the steam having left the boiler, passes along these tubes receiving more heat and generating more power.

THE PETROL ENGINE. The first mechanical vehicles running on roads were small steam-driven cars, and such was the outcry against these new juggernauts, that the authorities demanded the presence of a man walking before them with a red flag. Luckily the petrol engine was invented and has been improved to its present pitch of perfection. The march of progress has been so swift that the comparison between the coughing monstrosity of the beginning of this century and the beautifully-proportioned silently running vehicle of to-day is nothing short of stupendous.

The petrol, or internal combustion engine is somewhat similar in principle to the steam engine, but the working substance is petrol, vapourised by mixing with air, and exploded to give the necessary expansion force to move the piston.

The "carburetter," perhaps the most important thing attached to the engine, is a float chamber, in which a float and needle-valve control the inflow of petrol from the tank. The petrol in the float chamber is in communication with a jet which projects it into the hollow body of the carburetter, through which air is drawn by suction created by the pistons. When the engine is in action the level of the petrol in the float chamber is higher than that in the jet, therefore, this causes the petrol to overflow into the hollow part of the carburetter. Consequent upon the inrush of air through the open end of this, a constant fine spray of petrol mixes with air, and is vapourised on the way to the cylinder.



UPHOLSTERY

An upholstered article of furniture which has been in service for a number of years usually looks much older on account of the upholstered seat or back showing signs of considerable wear. To the average handy-man the difficulty of re-upholstering chairs or couches is not regarded with any degree of fear, and provided the necessary materials are at hand, it should be quite an easy matter to anyone.

The tools required are a small hammer, a sharp knife, a web strainer, and for some work an assortment of upholsterer's needles. The choice of covering materials is best left to the wishes of the lady of the house, or it may be decided by the rest of the furnishing. The necessary materials required, however, are webbing, canvas, and filling—either hair, wool or wadding. If the old springs in a seat have become feeble with long use, it is advisable to renew them.

Let us take as an example a chair with a spring seat. Firstly, with a hammer and an old chisel, remove all the tacks from the underside of the seat, having turned the chair over, resting the seat on a bench or table. There will now be revealed the webbing and the springs. Knock out the tacks holding the webbing, and cut loose the springs. The stuffing can now be removed and the covering taken off. Having made sure that all tacks have been removed, the chair is now ready for re-upholstering. If required, the frame can be sandpapered and re-painted or stained.

Place the chair seat down on the bench, and cut five pieces of webbing, three to run from back to front, and two to stretch across, leaving a little extra to turn over at the ends. Tack one piece at the centre of the back rail and with the web-strainer, stretch it tightly and tack it to the front rail, doubling the ends over so that the strands will not pull. Tack on two more pieces one each side of the first piece, so that the three pieces are evenly spaced. Two pieces are stretched across from side to side passing over the outside strips and under the centre strip running the opposite way. The three springs can now be stitched into position with string, one in the centre where the webbing crosses at the back, and one at each junction of the webbing at the front, where the outside and the front webbings cross. The chair should then be turned over, and a piece of spring canvas

HOME UPHOLSTERY—*continued.*

cut to the size of the seat, allowing sufficient for turning-in. Double the back edge over and tack it down, then stretch the canvas over the springs, slightly compressing them, and tack down at the front. The two sides are then treated in the same way. See that the springs are upright, and stitch them to the canvas. Next, take about 3 lbs. of grey flock and distribute this evenly over the top of the canvas, forming a neat pad. Cut the piece of covering material to the size required, allowing a turn-in, and tack down the back edge, cutting the corners to fit the uprights of the chair. Draw the material to the front, moulding the padding to a nice shape, and tack down, following with the two sides. Run some "gimp" round the edge to cover the edge of the material, or, if the covering is rexine, a strip of this material is folded and nailed on with nails covered with the same material. The bottom of the seat can now be covered with a piece of canvas, and the chair is as good as new.

The loose, lift-out type of chair seat is an easy thing to upholster. Remove all the old covering and padding, etc., and nail strips of webbing on to the frame, three from front to back, and two across, fixing them on to the top of the frame. Cover these with a piece of black linen, and stuff with curled horse-hair, then cover with two layers of wadding, and stretch on the covering material, folding underneath the frame and nailing on. It is advisable to see that the material is not too thick to allow the seat to fit nicely into place. If a thick material is chosen, reduce the frame all round till it allows for this.

A pouffe is a very handy piece of furniture to have about the house, being useful both as a footstool and a seat. The making of a pouffe is really a very simple matter, provided a little care is taken.

The most usual materials are silk tapestries and leather. We will suppose that the former has been chosen. Tack the piece of tapestry lightly to a board with a 16-inch circle marked out on it. This circle is now carefully cut out, and a piece of a similar size cut for the bottom. Now a piece of strong curtain material of a suitable colour to match the tapestry, is cut, 50 inches long by 10 inches wide. Seam the edges very carefully, and leave an opening of about 6 inches in the end of the border for filling. Turn it the right side out, and stuff it with about 7 lb. or 8 lb. of soft wool flock, care being taken to get this in evenly. Sew up the opening very neatly, and thump the pouffe into a good shape. A piece of string twine is placed round the "waist" and tightened sufficiently to give a nice shape. Now take a piece of upholstery cord 3 yards long. Four loops are made in this, about 8 or 9 inches apart. The loops are stitched with strong thread and the cord placed round the waist of the pouffe and the ends sewn firmly. The loops form the handles for moving.



DO YOU KNOW?

1.—THE GRID-PYLON ELECTRIC POWER SYSTEM.

This system of high-power electric current supply is rapidly spreading over the country, and there is no doubt that there will be many differences of opinion as to the beauty, or otherwise, of the tapering pylons and the long sagging wires. This system, of course, allows for the distribution of high-power current over an area which would be impossible to serve

by buried cable, the cost of the latter being too high.

The scheme, briefly, provides for the linking-up and distribution of current over various districts, the load as a rule being over 100,000 volts. The pylons are of two types: the single circuit straight-line tower, having three arms; and the double circuit straight-line tower, having six arms. The conductor wires, slung on heavy porcelain insulators, are hung on the ends of the arms, and the wire running from the tops of the towers is the earth-wire.

2.—AUTOMATIC TELEPHONE DEVELOPMENT.

The original use of the automatic telephone was for inter-departmental communication, and for this purpose has been in use for a number of years. The system is the putting into operation of a series of relays, according to the number dialled, which act on selector switches at the automatic exchange, these connecting with the particular number which has been dialled. It will thus be seen that a considerable saving in time is effected, as with the manual switchboard, it is necessary to call the operator, give the name of the department, and wait for the operator to make the connection.

3.—THE ADVANTAGES OF BUSES OVER TRAMS.

The greatest advantage held by the bus over the tramcar is mobility. Trams, naturally, are confined to the routes laid with track, and thus only specified routes can be served by these vehicles. But not so with the bus, for any street or road along which traffic can pass is a possible route, and the route can be altered if necessary. Then again, the bus can thread its way through traffic, a thing impossible for the tram, which, if held up

DO YOU KNOW ?—continued.

in any way, must wait until the line is clear before proceeding. With the advent of so much traffic on the road, it is a rather risky business boarding or leaving a tram, whereas a bus can pull-in to the sidewalk and the passengers step on or alight with perfect safety. It is difficult to compare the running costs of the two methods of transport, but as most cities and towns are increasing their fleets of buses, it seems safe to presume that the buses have the advantage in this direction also. Of course, with the development of the suburbs of so many large cities and towns, a good transport service is essential, and the cost of extending the rails and overhead trolley equipment is quite out of the question compared with the initial cost of buses. Add to all these the fact that for comfort the bus has it every time, and the scale is tipped well in favour of the petrol bus.

4.—WHY AND HOW AN AEROPLANE RISES.

If a kite is launched in a wind, it rapidly climbs till it reaches a certain altitude, and it remains there so long as the wind does not drop. The force of gravity is acting continually on the kite, tending to bring it to earth, but the force of the wind overcomes the force of gravity, and consequently the kite remains in the air. If there were no wind, and the holder of the kite were to run with the kite, the kite would tend to rise, as a sort of artificial wind would be created. The same principle applies to the aeroplane, the engine and propeller acting as the pulling force. The 'plane is drawn along against the air or the wind, and the air is displaced by the slightly sloped under-surface of the wing or wings, exerting a pressure on this surface in the same manner as the wind on the kite, with the result that the aeroplane is lifted. For this reason, a 'plane always takes off against the wind. The rise is helped by the ailerons, or small movable flaps at the back of the wings. When these are elevated the air-pressure on them tends to force them down, thus exposing a greater surface of the wing to the wind, which, consequently exerts a greater pressure and increases the lift.

5.—RADIUM.

Radium is the most characteristic of substances which possess the property of radio-activity, and this process was first observed in uranium, by Becquerel, in 1896. In 1898, Schmidt and Madame Curie discovered almost simultaneously that compounds of thorium had the same radio-activity. Madame Curie, with her husband and Bemont, made elaborate investigations which led to the discovery of polonium and radium. In 1899, Debierne discovered actinium, while much important work was done by Rutherford, Crookes, Ramsay, Soddy, Huggins and others.

DO YOU KNOW?—continued.

Radium is derived from Pitch-blende, in which it exists in very small quantities.

6.—X-RAYS.

These rays were first discovered, in 1895, by Röntgen, while investigating the passage of high voltage electric currents through vacuum tubes. He noticed that rays were emitted differing in properties from any known radiations. Though invisible, they caused fluorescence in certain crystals, notably platino-cyanide of barium, and they had the power to penetrate certain opaque substances, such as wood and aluminium, while they were stopped by heavier metals and other dense substances. Röntgen named these "X" rays to express his lack of knowledge of their nature.

7.—THE FIRST AND LAST INN IN ENGLAND.

In Sennen, Cornwall, about three-quarters of a mile from Land's End, is situated a quaint hostel, the sign of which is probably the most curious in the country. As the traveller approaches the inn from inland, the sign-board reads: "The Last Inn in England," and on the seaward side, "The First Inn in England." Many inns have curious names, but this is one of the few, if any others exist, having two names on the sign.

8.—NEW LINERS of ENGLAND, GERMANY and FRANCE.

The Cie Generale Transatlantique of France have built a beautiful luxury liner named *Lafayette*, while Germany has captured a great amount of the passenger service with the sister ships *Bremen* and *Europa*, built for the Norddeutscher Lloyd Line.

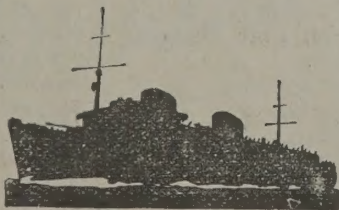
We ourselves have the new *Empress of Britain*, belonging to the Canadian Pacific Railway Co., and the new White Star Liner *Britannic*, a motor-ship.

The *Lafayette* is 577.2 feet in length, 77.6 feet in breadth and 27.9 feet in depth; 25,178 tons.

The *Bremen* is 898.7 feet in length, 101.9 feet in breadth and 48.2 feet in depth; tonnage 51,656.

The *Europa* is 890.2 feet in length, 102.1 feet in breadth and 48 feet in depth. The same tonnage as the *Bremen*.

The *Empress of Britain* is 733.2 feet in length, 97.8 feet in breadth, and 56 feet in depth, with a tonnage of 42,348.



DO YOU KNOW?—continued.

The *Britannic* is 712 feet in length, 82 feet in breadth, and 44 feet in depth; tonnage 27,000.

9.—THE LATEST NEWSPAPER PRINTING MACHINES.

The design and speed of the modern newspaper press is a revelation to the person who has not seen one in operation. The paper is fed into the machine from a huge reel, passing through rollers, printed from curved plates, cut, folded and delivered counted in thirteens. The latest presses are built up of units, even using up to nine reels of paper, printing 350,000 copies per hour.

10.—THE TAXATION YIELD FROM MOTORS.

The amount of money obtained from the taxation of motors affords an interesting example of the growth in popularity of the motor-car in this country. From December 1st, 1930, to November 30th, 1931, a gross revenue of approximately £15,000,000 was obtained from the taxation of motor-cars, taxed on horse-power, and motor-cycles, and of approximately £12,250,000 regarding commercial motor vehicles, including hackney motor vehicles. This gives a total yield of approximately £27,250,000.

11.—THE MEANING OF THE GOLD STANDARD.

This term denotes a state of affairs in which a country keeps the value of its monetary unit and the value of a defined weight of gold on an equality with one another.

12.—THE POPULATIONS OF PRINCIPAL COUNTRIES.

Austria	6,600,000	Sweden	6,150,000
Belgium	8,000,000	China	449,000,000
Czechoslovakia ..	14,730,000	India	353,000,000
Denmark	3,560,000	Japan	84,000,000
France	41,000,000	Persia	10,000,000
Germany	63,000,000	Russia (Asia) ..	29,750,000
Gt. Brit. & N. I.	44,500,000	Turkey	12,000,000
Greece	6,200,000	Abysinnia	11,000,000
Hungary	8,700,000	Egypt	14,000,000
Irish Free State	3,000,000	South Africa ..	8,000,000
Italy	43,000,000	Canada	9,940,000
Netherlands ..	8,000,000	Mexico	16,400,000
Norway	2,810,000	United States ..	137,000,000
Poland	31,000,000	Argentina	10,500,000
Portugal	6,000,000	Brazil	40,000,000
Roumania	18,000,000	Colombia	8,000,000
Russia (Europe)	108,100,000	Australia	6,000,000
Spain	21,763,000	New Zealand ..	1,461,000



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